Work	Ord	ler	ID	107	7953

Quality Control

Memo

## \*107953\*

Page 1

October-07-13 9:03:04 AM \*N900040100\* Item ID: 646.3812 Accept Setup Start Revision ID: Gusset Bracket Item Name: \*10\* **Start Qty: 10.00** 10/07/13 Start Date: **Cust Item ID:** Required Date: 10/07/13 Req'd Qty: 10.00 \*10\* **Customer:** Reference: Run Process Plan: MUS Date: 13-10-09 Tooling: Approvals: Stop Date: \_\_\_\_ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Reject Reject Tool ID Tool # Plan Accept Insp. Description Work Center ID Qty Number Stamp **Run Hours** Code **Qty** Draw Nbr **Revision Nbr** .646.3800 NC 110 0.00 HAAS CNC VERTICAL MACHINING #1 \*110\* 10 C 13/11/06 HAAS 1 Memo HAAS CNC vertical machine #1 1-Machine per DWG DWG REV: N/C 2- deburr and break all sharp edges QC2- Inspect parts off machine FAI/FAIB 120 10 Ø 13/11/06

NCR:	Yes	/ No				WORK ORDER NON-O	100	NFOR	MANCE / UPE	DATE			
											QA Closed:	Date	
Work Ord	er:					DISPOSITION	7			AGAINST DE	PARTMENT,		,
Part f	No.	<del></del>				Rework Scrap Use-as-is			Skid-tube Machining noforming	Crosstube Small Fab Finishing	ł	Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other
NCR I	No.					Work Order Update	]		Large Fab	Composite		Supplier	
Root					Descri	ption of work order update		Initial	Acti	ion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling			İ										
Operator													
Material												-	
Setup													
Other													
Process			ļ										
Supplier											ļ		
Training													
Unapproved					<u> </u>								
							AUL	T CATE	GORY				
Landi		1				General		7			,		
		Bending			·	Bend		Grain			Ovalized	_	Pressure/Forced
	<u> </u>	Centre No	ot Concer	ntric to	o/s	BOM/Route	L	Hardwa	re		Over/Under	<del> </del>	Temperature/Cure
		Cracks				Broken/Damaged	<u>_</u>	4	on Incomplete		Part Incorre	ct	Weld
	·	Crushed/	Crimped.			Burrs	<u></u>	4	ions Incomplete/U	Inclear	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte			Part Moved		
	⊢	Heat Trea				Countersink		Mislabe	eled		Positioned V	Vrong	
		Inspection	•	Tube		Cut Too Short		Misread	t	L_	Power Loss/	Surge	Other
		Ripples in				Drill Holes		Offset					
		Torque W	aves in E	xtrusio	n 📗	Drawing		Out of 0	Calibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Insp.

October-07-13 9:03:04 AM Accept Setup Start 646.3812 \*N900040100\* Item ID: **Revision ID:** Gusset Bracket Item Name: \*10\* **Start Date:** 10/07/13 **Start Qty: 10.00 Cust Item ID:** Req'd Qty: 10.00 Required Date: 10/07/13 **Customer:** Reference: Run Process Plan: \_\_\_\_\_ Date: \_\_\_\_ Tooling: Date: Approvals: Stop Date:\_\_\_\_\_ SPC (Y/N): Date: QC: Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject Sequence ID/ Code Qty Oty Number Stamp Work Center ID Description **Run Hours** 0.00 QC8- Inspect parts - second check 130 A 13/11/04 \*130\* 0.00 Memo Quality Control Outsource process-Anodize per QSI017 4.1.10.1 0.00 CX 13/11/12 0.00 Outsource4 Memo Issue P/O to ATG: 22026 Outsource process - Anodize 1- Black Anodize as per Dwg 646.3800 2- PRIME AS PER DWG, SEE NOTE #2

/3/4/20 (10)

150

Receive & Inspect for Damage & Mat'l Certs

Certification of Comformity is required

0.00

\*150\*

Packaging

Memo

0.00

Packaging

											DQA:	Date	:
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UPE	DATE		-	
											QA Closed:	Date	
Work Ord	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part I	No.					Rework Scrap Use-as-is Work Order Update Skid-tube Machining Thermoforming Large Fab			Crosstube Small Fab Finishing Composite	Fab Prod. Eng. Coor. Quality hing Rec/Store/Packaging Other			
Root					Descri	ption of work order update		Initial	Act	ion	Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Descr	iption	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
						F	AUL	LT CATE	GORY				
Landi		<b>iear</b> Bending				General Bend		Grain			Ovalized		Pressure/Forced
		Centre No	ot Concer	ntric to (	o/s	BOM/Route		Hardwa	re		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
	Ш	Crushed/	Crimped.			Burrs		4	ions Incomplete/U	Inclear	Part Lost/M	issing	Wrong Stock Pulled
	Ш	Cuffs				Contamination		Mainte			Part Moved		
	Ш	Heat Trea				Countersink		Mislabe	led		Positioned \	_	_
	Ш	Inspection	n Strip in	Tube	<u> </u>	Cut Too Short		Misread	1		Power Loss,	'Surge	Other
	Ιİ	Ripples in	Bend			Drill Holes		Offset					

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Work Orde	er ID 107953 9:03:04 AM			*107	·				Page			
Item ID: Revision ID: Item Name:	646.3812 Gusset Bracket			Accept	*N900	<b>040</b>	100	)*	Setup	Start Stop	ı VI .	S1* S2*
Start Date: Required Date: Reference:		t Qty: 10.00 d Qty: 10.00	*10 *10	•	Cust Item I	D:						
Approvals:	Process Plan:		Date:	Tooling: SPC (Y/N):		ite:			Run	Start Stop	<i>"\\</i>	R1* R2*
Sequence ID/ Work Center II		ation ription		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accep Qty	t Re Qt	ject y	Reject Number	Insp. Stamp

0.00

0.00

DAS

155

Identify as per dwg & Stock Location: \$1535 0.00

QC5- Inspect part completeness to step on W/O

Memo

Memo

\*180\*

\*155\*

Quality Control

Packaging

Packaging

0.00

\*\*\*IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV\*\*\*

QC21- Final Inspection - Work Order Release

0.00

\*190\*

Quality Control

Memo

13/11/2190 MF (3/1-2)

0.00

**NS1**\* **NS2\*** 

Page 3

											DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-O	CO	NFOR	MANCE / UP	DATE			•
											QA Closed:	Date:	
Work Orde	٥r.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N	•					Rework Scrap Use-as-is		ı	Skid-tube Machining	Crosstube Small Fab Finishing	-)	Water Jet d. Eng. Coor.	Engineering Quality Other
NCR N	۷o. <sub>.</sub>				<del></del>	Work Order Update	]	mem	noforming Large Fab	Composite	Nec/3to	re/Packaging Supplier	Other
Root					Descri	ption of work order update	1	nitial	Ac	tion	Sign &		
Cause		Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Desc	ription	Date	` Verification	QC Inspector
Doc/Data													
Equip/Tooling													
Operator	Ш					×							
Material													
Setup													
Other													
Process							1						
Supplier													
Training	Ш												
Unapproved			<u> </u>					***					
						F.	AUL	T CATE	GORY				
Landi	ng G	Gear				General		•			_		_
		Bending			L	Bend		Grain			Ovalized		Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	ire		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspect	ion Incomplete		Part Incorre	ct	Weld

Instructions Incomplete/Unclear

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Part Moved

Wrong Stock Pulled

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Crushed/Crimped.

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

**Picklist Print** 

October-07-13 9:03:04 AM

Page 1

Work Order ID:

107953

Parent Item:

646.3812

Parent Item Name:

Gusset Bracket

**Start Date:** 10/07/13

Required Date: 10/07/13

**Start Qty: 10.00** 

Required Qty: 10.00

Comments:

IPP REV:A NEW ISSUE 12-10-22 JLM VERIFIED:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6A0.75X0.75X0. 060X0.062		Purchased	No				f	101.0500		1			

7075T6 ANGLE .75" X .75" X .060" X .062"W

Location Loc Qty Loc Code MAT036 101.05 ¥ 123947 101.05

1.75 P.K 13/04/06

NCR:	Yes / No				WORK ORDER NON-O	CONF	ORN	AANCE / UP	DATE		_	•
					· · · · · · · · · · · · · · · · · · ·	- <sub>I</sub>				QA Closed:	Date	•
Work Orde	or·				DISPOSITION				AGAINST DE	PARTMENT	PROCESS	
WOIR Olde					Rework	7 <b> </b>		Skid-tube	Crosstube		Water Jet	Engineering
Part N	No.				Scrap	1 1		Machining	Small Fab	Pro	d. Eng. Coor.	Quality
					Use-as-is	1 <b> </b> T	herm	noforming	Finishing	1	e/Packaging	Other
NCR I	No				Work Order Update	]		Large Fab	Composite		Supplier	
Root		1			ption of work order update	Initi	ı		tion	Sign &		
Cause	Date	Step	Qty	•	or Non-conformance	Chief	Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator				,								
Material												
Setup												
Other												
Process	Ш											
Supplier										1	:	
Training												
Unapproved			<u> </u>	<u> </u>					· · · · · · · · · · · · · · · · · · ·			
						AULT C	CATE	GORY				
Landi	ng Gear			_	General					1	_	¬
	Bending			_  _	Bend	$\vdash$	rain			Ovalized	-	Pressure/Forced
	<del></del>	Not Conce	ntric to	o/s  _	BOM/Route	<b>⊢</b>	ardwa			Over/Under	<b>├</b>	Temperature/Cure
	Cracks				Broken/Damaged	$\mathbf{H}$	•	on Incomplete		Part Incorre	<b>├</b>	Weld
	<b>—</b>	/Crimped	-		Burrs			ions Incomplete/	Unclear	Part Lost/M	ssing	Wrong Stock Pulled
	Cuffs				Contamination	$\vdash$		nance	<u></u>	Part Moved		
:	Heat Tre			<u></u>	Countersink	ШМі	islabe	led		Positioned V	_	
	<b>⊢</b>	on Strip in	Tube		Cut Too Short	Шмі	isread	l		Power Loss/	Surge	Other
	Ripples	in Bend			Drill Holes	Of	fset					
	Torque	Waves in I	Extrusio	n [	Drawing		it of C	alibration				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order: 107953
	The second secon
Description: GUSSET BRACKET	Part Number: 646.3812
Inspection Dwg/246.3800 Rev: U/C	Page 1 of 1

## FIRST ARTICLE INSPECTION CHECKLIST

Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
t/- 0005	2,001	)		FK-04	M Vern
+1- 600 030	,451	7		υ	4
+1-0000	. 665	7	·	h	n
+1070	،063	7		R-G	
+/- 00%	.313	7		FK-04	Vern.
080, -/+	2538.	7		4	1
41030	1-253	1		h	٨
l '	ୃତଃବ	7		η	h
,					
	<u>-</u>				
					·
	+/035 +/030 +/030 +/030 +/030	Tolerance Dimension  +/035	Tolerance Dimension Accept  +/- 005 2.001  +/- 050 .751  +/- 050 .065  +/- 050 .063  +/- 050 .313  +/- 050 .3675  +/- 050 1.253	Tolerance  Dimension  Accept Reject  1/- 005 2.001  1/- 050 .751  1/- 050 .065  1/- 050 .063  1/- 050 .313  1/- 050 .3675  1/- 050 1.253	Tolerance  Dimension  Accept Reject Inspection  1/- 005 2.601  1/- 050 .751  1/- 050 .065  1/- 050 .063  1/- 050 .313  1/- 050 .3675  1/- 050 1.253

	2A0		
Measured by:	44	Audited by:	Preliminary Approval:
Date:	13/11/06	Date: 13/11/06	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15

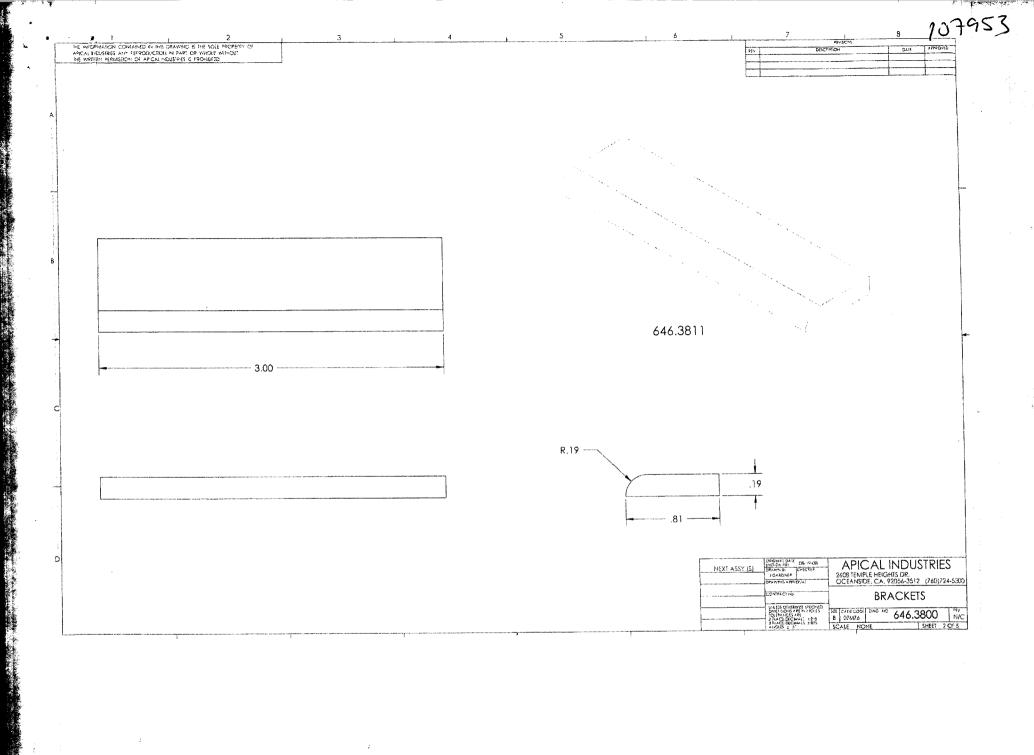
ENGINEERING CHANGE NOTICE NO. 03697 SHEET 1 OF 1 REV: N/C PREPARED BY B. PETERS EFFECT ON DWG DATE: 11/14/12 DWG NO. 646.3800 APICA ☐ INC. Ø UNINC. DWG TITLE: BRACKETS INDUSTRIES, INC. MFG David Barbon NEXT ORDER APPROVED BY TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE REASON: D-12-006 ADDED ALTERNATE MATERIAL.

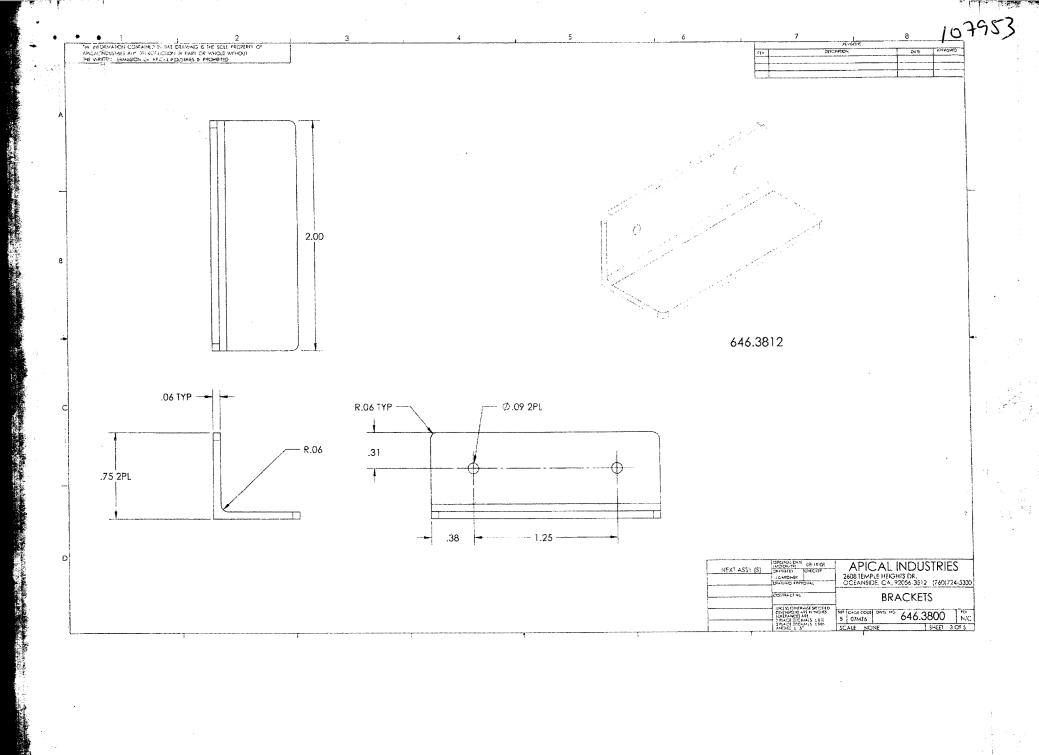
PRIMARY MATERIAL: 7075-T651 ALUMINUM PER AMS-QQ-A-250/12.
ALTERNATE MATERIAL: 7075-T6511 ALUMINUM PER AMS-QQ-A-200/11.

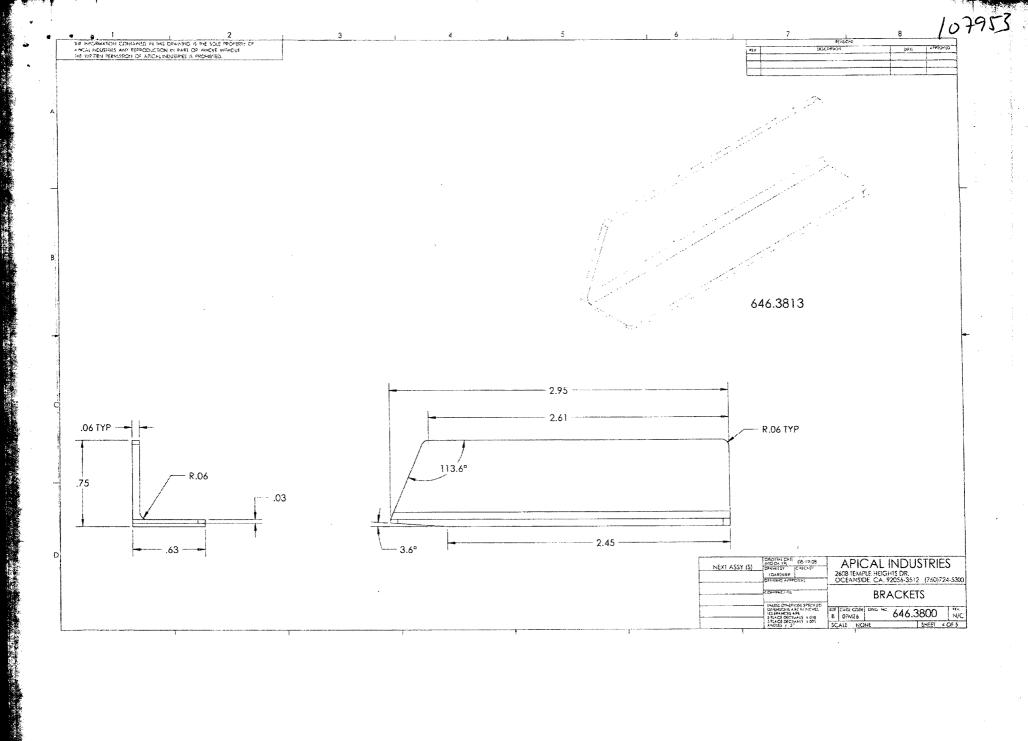
## SHEET 1, ZONE A2 IS:

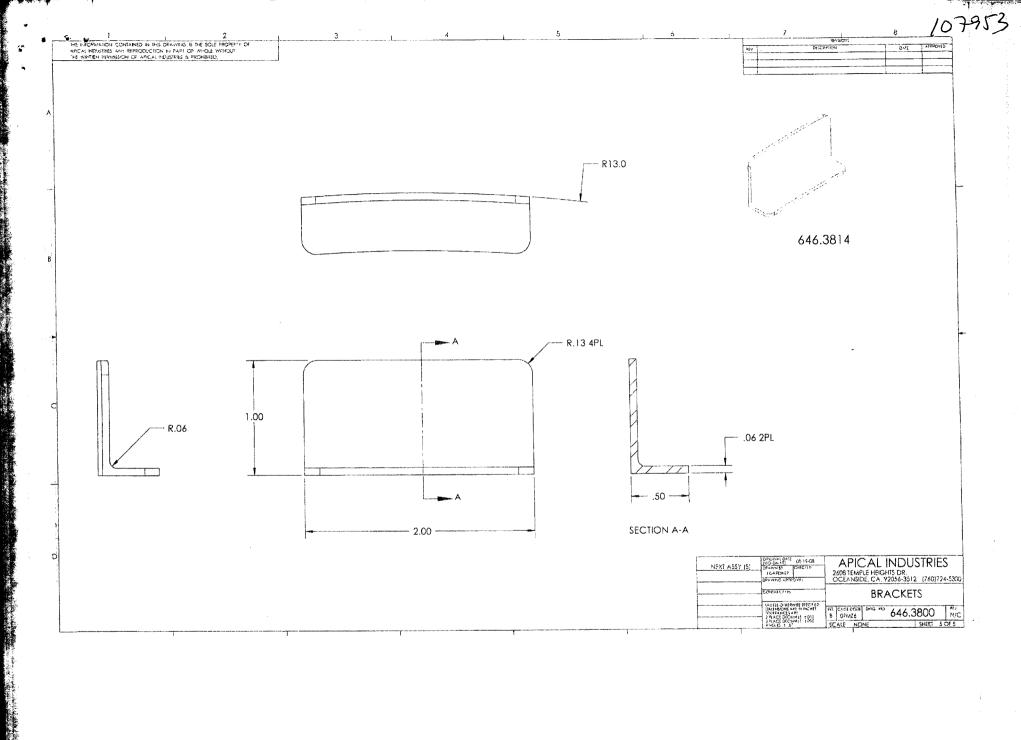
107953 MLJ 13-10-09

FZN TC PART NUMBER	OTY	DESC	RIPTION		MATERIAL	SPE	ECIFICATION
DOCUMENTS EFFECTED	□ RFMS		☐ INSTALL INSTRUC	□ ICA		R REVIE\ □ YES	√ REQUIRED 図 NO











A.T.G. Industries Inc. 731, rue Industrielle Rd. PLATING DEPARTMENT Rockland, On K4K 1T2 Canada

Ph: (613) 446-4544 Fax: (613) 446-4556

## Pack List

Number: 62747

Date: 19-Nov-13

To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 Canada Ship To

DART AEROSPACE LTD 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

	· · · · · · · · · · · · · · · · · · ·			
Terms		Ship Via		
Quantity	Description	· · · · · · · · · · · · · · · · · · ·		
1	Part: ASST		Rev:	
lot				
	10 PCS 646.3912 (5.90)			
	4 PCS 646.3810 (6.55) 8 PCS 649.5310 (12.65)			
	HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2			
	PRIME MIL-P-23377J TYPE I CLASS N			
	PRICE IS PER PIECE Job: 20130715	PO: 22026	Line:	
	Certificate of Conformance  A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.			
	ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY  DATE : 19/11/13  CERTIFIED SIGNATURE :			
	RECEIVER SIGNATURE :			
	3			